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Sharad Sundaresan

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EXAMINER

BILGRAMI, ASGHAR H

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/924,731	Applicant(s) SUNDARESAN ET AL.	
	Examiner ASGHAR BILGRAMI	Art Unit 2443	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19,21-32,34,35 and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19,21-32,34,35 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19, 25-32, 34, 35 & 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck et al (U.S. 6,801,949 B1) and Hart (U.S. 6,154,765).

3. As per claims 19, 32 & 35 Bruck disclosed, in a distributed computing system comprising a server cluster and a client computer, wherein the server cluster includes a first server and a second server and wherein the client computer includes a client application, a cache (col.17, lines 62-67 & col.18, lines 1-7), and a network access module (NAM) by which the client application communicates with the server cluster (col.2, lines 38-65) a method for providing seamless fail-over of communication between a client computer and the server cluster, the method comprising: detecting by the NAM, a failure of a first Virtual Interface Architecture (VIA) protocol connection between the first server in the in the server cluster and the client application (col.2, lines 38-65) ; the first connection established using connection information of the first server mapped to a server name and cluster name of the cluster server (col.9, lines 31-39); sending, by the NAM, a Server Resolution Protocol request to the server cluster {"Address Resolution Protocol" in Bruck is analogous to "Server Resolution Protocol", they both perform the

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same functionality} (col.15, lines 20-65) , requesting connection information for a server associated with the server name and the cluster name of the server cluster (col.27, lines 23-45, figures 12, 23 & 38) receiving by the NAM, a Server Resolution Protocol response from the server cluster comprising connection information {connection information is a catchall for IP address ,network address and respective subnet} of the second server; caching by the NAM, the received response in the cache of the client computer (col.17, lines 62-67 & col.18, lines 1-7) such that the cache contains a mapping between the connection information of the second server and the cluster name and the server name (col.15, lines 20-65) and establishing by the NAM, a second Virtual Interface Architecture Protocol connection between the client application and the second server using the connection information of the second server (col.27, lines 46-67 & col.8, lines 1-24). Although Burk did disclose that the server cluster provides a Highly available Internet Link to achieve transparent web server fail-over but Bruck did not explicitly disclose wherein the first and second connection are over a Virtual Interface Architecture (VIA) protocol and wherein the server cluster does not provide fail-over support to redirect a request from the client application from the first server to the second server when the server cluster automatically switches operation from the first server to the second server; wherein the detecting , the sending, the receiving, caching, and the establishing are performed by the NAM to provide seamless fail over connectivity from the first server to the second server in a manner transparent to the client. In the same filed of endeavor Hart disclosed wherein the first and second connection are over a Virtual Interface Architecture (VIA) protocol (col.8, lines 31-33)

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and wherein the server cluster does not provide fail-over support to redirect a request from the client application from the first server to the second server when the server cluster automatically switches operation from the first server to the second server; wherein the detecting , the sending, the receiving, caching, and the establishing are performed by the NAM to provide seamless fail over connectivity from the first server to the second server in a manner transparent to the client (col.2, lines 21-25, 65-67; col.4, lines 29-37 and col.8, lines 57-67) { Digital rule processor can implemented on any nodes (to include client node) on the network and it can perform seamless failover functionality}.

It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated the implantation Virtual interface Architecture protocol and wherein the server cluster does not provide fail-over support to redirect a request from the client application from the first server to the second server when the server cluster automatically switches operation from the first server to the second server; wherein the detecting , the sending, the receiving, caching, and the establishing are performed by the NAM to provide seamless fail over connectivity from the first server to the second server in a manner transparent to the client by Hart into the method of seamless fail-over of communication between a client and a cluster of servers as disclosed by Bruck in order to make the system more scalable resulting in a more reliable network communication between network devices.

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4. As per claim 25 Bruck-Hart disclosed the method of claim 19, wherein the Server Resolution Protocol request is sent by User Datagram Protocol (UDP) (Burk, col.14, lines 55-56 & col.15, lines 1-10)

5. As per claim 26 Bruck-Hart disclosed the method of claim 19, wherein the first server and second server store and retrieve relational data by way of Structured Query Language (SQL) commands (Burk, col.7, lines 30-37)

6. As per claim 27 Bruck-Hart disclosed the method of claim 19, wherein the first server is designated as active and the second server is designated as passive (Burk, col.2, lines 6-15)

7. As per claim 28 Bruck-Hart disclosed the method of claim 27, wherein the second server periodically sends a keep- alive message to the first server (Bruck, col.3, lines 41-59).

8. As per claim 29 Bruck-Hart disclosed the method of claim 28, wherein the second server assumes designation as active when the first server fails to response to the keep-alive message (Bruck, col.3, lines 10-59).

9. As per claim 30 Bruck-Hart disclosed the method of claim 19, wherein the connection information provided in the server Resolution protocol response contains a

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plurality of port numbers, wherein each port number corresponded to a different communications protocol (Bruck, col.7, lines 30-37).

10. As per claim 31, 34 & 37 Bruck-Hart disclosed the method of claim 19, wherein the first connection and the second connection comprise VIA formatted packets (Hart, col.8, lines 30-33).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruck et al (U.S. 6,801,949 B1), Hart (U.S. 6,154,765) and Brendel et al (U.S. 5,774,660).

13. As per claim 21 Bruck-Hart disclosed the method of claim 19. However Bruck-Hart did not explicitly disclose wherein the establishing the second connection comprises retrieving a network address from the connection information of the second server from the cache. In the same filed of endeavor Brendel disclosed the establishing the second connection comprises retrieving the network address of the second server from the cache (col.2, lines 41-52).

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It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated the establishment of the second connection to the second server by utilization of the second server network address from the cache as disclosed by Brendel in the method of seamless failover of communication between a client and cluster of servers utilizing a Virtual Interface Architecture (VIA) as disclosed by Bruck and Hart in order to make the client and server connection more efficient resulting in a network system that is robust and reliable.

14. As per claim 24 Bruck-Hart disclosed the method of claim 19. However Bruck-Hart did not explicitly disclose further comprises purging the cache prior to caching the response from the second server. In the same field of endeavor Brendel disclosed further comprises purging the cache prior to caching the response from the second server (col.3, lines 40-49).

It would have been obvious to one in the ordinary skill in the art at the time the invention was made to have incorporated purging the cache prior to caching the response from the second server as disclosed by Brendel in the method of seamless failover of communication between a client and cluster of servers utilizing a Virtual Interface Architecture (VIA) as disclosed by Bruck and Hart in order to make the client and server connection more efficient resulting in a network system that is robust and reliable.

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15. As per claim 22 Bruck-Hart and Brendel disclosed the method of claim 21, further comprising verifying that the second server maps to the server name (Burk, col.35, lines 46-67 & col.36, lines 7-17).

16. As per claim 23 Bruck-Hart and Brendel disclosed the method of claim 22, wherein verifying that the second server maps to the server name comprises verifying that the second server is responsive to the server name (Burk, col.35, lines 46-67 & col.36, lines 7-17).

Response to Arguments

Applicant's arguments filed 9/23/2009 with respect to the amended limitations have been fully considered but they are moot based on the revised rejection.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASGHAR BILGRAMI whose telephone number is (571)272-3907. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia L.M. Dollinger can be reached on 571-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. B./

Examiner, Art Unit 2443

/Tonia LM Dollinger/

Supervisory Patent Examiner, Art Unit 2443